

for insect control on about 900 acres in the Klamath National Forest, resulted in a saving of timber to the value of over \$600,000 (p. 96).

Friends of conservation will be interested to learn (p. 114) that a single issue of a New York Sunday paper consumes the trees on about 15 acres of forest. Apropos of this, one may perhaps be pardoned for questioning the wisdom, or the advantage from any point of view, of using eleven pages (pp. lix-lxix) to repeat in full the legends of the 80 illustrations. The analytical table of contents hardly makes up for the absence of an index. Incidentally it might be remarked that the fringed edges (technical term unknown to the reviewer—chewed would be appropriate) make it necessary to use the carpet sweeper and whisk broom after one has spent an hour with the book.

But the few features that may be noted adversely are minor matters in comparison with the general excellence of the book. It gives a terse and readable survey of the history and activities of the Forest Service, and makes clear the need and value of this work. It will be invaluable as a reference book in all colleges and universities, and in public and private libraries. Both the author and the cause of forestry and conservation are to be congratulated.

C. STUART GAGER.

Harwood's New Creations in Plant Life*

The revised and enlarged reprint of the first edition of W. S. Harwood's "New Creations in Plant Life" reads like a Florida land investment prospectus or a modern version of "The Arabian Nights."

Mr. Harwood tells the story of Luther Burbank and his work with all the enthusiasm, all the veracity, and all the inspiration one expects from one whose years have been devoted to journalistic effort. In Chapter I is recounted the struggles and tribulations of Burbank, the man, toward accomplishing his life's ideal. "Now and again," Mr. Harwood writes, "arose some pseudo-scientific man who, professing unlimited friendship,

* Harwood, W. S. *New Creations in Plant Life*. 2d ed., Revised and Enlarged. Pp. xviii + 430. Illustrated. The Macmillan Co., N. Y. 1918. Price \$2.00.

sought for means to filch the rapidly increasing reputation. Others visited him with the covert purpose of exposing him as a charlatan after inspecting his methods, but, confounded by what they saw, went down the little hedge-bordered walk that leads to his quiet home shamed into silence."

Chapter II details the methods of work of this horticultural wizard. On pages 40-43, a list of some of the miracle-like accomplishments are set forth. Among these are "The improved thornless and spiculeless edible cactus, food for man and beast, to be the reclamation of the deserts of the world"; the union of the plum and the apricot, said to be an impossible accomplishment; a plum with a Bartlett pear flavor; a tree which grows more rapidly than any other tree ever known in the temperate zones of the world; a dahlia with the scent of magnolias, a calla lily with a Parma violet's fragrance, a chestnut tree that bears in eighteen months from seed, an amaryllis with flowers nearly a foot in diameter, a calla with flowers 10-12 inches across, a rare fruit called the pomato, "which grows upon the top of a potato," and so on. This genius, according to Mr. Harwood, so remarkably possessed with horticultural intuition, has bred the pits out from the plum, the bitter tannin from the English walnut, given a trailing-arbutus perfume to the verbena, created new species long thought impossible, taken the horrid thorns off from blackberries, and make them beautifully white in fruit. All these have been accomplished and the "half has not yet been told."

On page 51 is computed the gross financial returns for 160 acres of average farm land for 12 years if planted to one of Burbank's hybrid walnut creations. The sum is \$485,000, very nearly half a million. The expenses to be deducted from this in the form of care, taxes, etc., are said to be small. On page 68, a paragraph is devoted to Mr. Burbank's work on the chestnut. Ordinarily, we are told, the chestnut trees raised from seed are from 10 to 25 years old before they bear nuts. Now this was altogether too slow for these modern days, so Mr. Burbank produced a tree that bears nuts when seven months to a year and a half old. The readers of this review, possessing desert properties not accessible to irrigation will be interested in state-

ments of an annual yield per acre of 20 tons of spineless cactus which can be utilized for cattle food. In tropical climates, where the land can be irrigated lightly once or twice, an annual yield of 150-180 tons per acre may be expected. As contrasted with 100 acres alfalfa under the best conditions, the yield of Burbank cactus under equally favorable conditions would be 30 to 40 times, we are told on pp. 390-391. And the best of it all, according to our author, is "that once established, the new cactus may remain for years uncultivated and undisturbed, constantly growing on and adding to its vast store."

To the flower lover, the account of Burbank's work with poppies will surely be of absorbing interest. On page 79, a Burbank poppy is described with flowers, a dozen of which placed one upon another, would effectually conceal a man—seven of these magnificent blossoms placed end to end in a row are as high as a tall man.

The volume is well and quite copiously illustrated and no one interested in flowers, fruits, and plant life in general can help being fascinated and very much impressed with this account of the wonders an untrained and comparatively uneducated man has produced in the plant world through using his intuition.

ORLAND E. WHITE.

PROCEEDINGS OF THE CLUB

OCTOBER 30, 1918

The meeting was held in the Morphological Laboratory of the New York Botanical Garden, at 3:30 P.M. There were thirty persons present. Vice-president Barnhart occupied the chair.

The minutes of October 8 were read and approved.

The nomination and election of M. Nishimura, Columbia University, N. Y. City, and Dr. Thos. Owen, Dept. Archives and History, Montgomery, Alabama, followed.

A communication from Prof. J. E. Kirkwood relating to the publication of a paper as one of the *Memoirs* of the Club was read and referred to the Board of Editors for a report.

The scientific program for this meeting consisted of an "Ex-